

## WHAT IS CLAIMED IS:

1. A beer or like alcohol beverage dispensing apparatus comprising:
  - a keg containing beer or like alcohol beverage and having a bottom portion and an upper portion remote from the bottom portion;
  - a keg dispensing device extending into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion;
  - a cooling apparatus in heat transfer contacting relation with the keg for extracting heat from the beverage contained in the keg through the bottom portion of the keg to thereby cool the beverage, the cooling apparatus comprising:
    - a first temperature sensor mounted in heat sensing relation with a bottom portion of the keg to sense first temperatures related to temperature of the beverage at the bottom portion of the keg;
    - a second temperature sensor mounted in heat sensing relation with an upper portion of the keg to sense second temperatures related to temperature of the beverage at the upper portion of the keg; and,
    - a cooling controller responsive to the first and second temperature sensors for controlling operation of the cooling apparatus to extract heat from the bottom portion of the keg to lower and maintain temperature of the beverage contained in the keg at a desired beverage serving temperature.
2. The apparatus of claim 1 wherein the controller cycles the cooling apparatus on when either one, or both, of the first and second temperature sensors sense temperature above the desired beverage serving temperature.
3. The apparatus of claim 1 wherein the controller cycles the cooling apparatus off when the both the first and second temperature sensors sense temperature indicative of the beverage being at its desired beverage serving temperature.
4. The apparatus of claim 1 wherein the controller cycles the cooling apparatus off when the first temperature sensor senses temperature associated with the beverage freezing.
5. The apparatus of claim 2 wherein the controller cycles the cooling apparatus off when the first temperature sensor senses temperature associated with the beverage freezing.
6. The apparatus of claim 2 wherein the controller cycles the cooling apparatus off when the both the first and second temperature sensors sense temperature indicative of the

beverage being at its desired beverage serving temperature.

7. The apparatus of claim 6 wherein the controller cycles the cooling apparatus off when the first temperature sensor senses temperature associated with the beverage freezing.

8. The apparatus of claim 1 wherein the keg has a top portion through which the keg dispensing device extends into the keg.

9. The apparatus of claim 8 wherein the keg dispensing device comprises a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing the beverage therethrough and out of the keg.

10. The apparatus of claim 1 wherein the cooling apparatus comprises a cooling plate in heat transfer relation with bottom portion of the keg for extracting heat therefrom and a Peltier thermoelectric device in heat transfer relation with the cooling plate for extracting heat from the cooling plate.

11. The apparatus of claim 1 further comprising insulated walls surrounding the keg.

12. The apparatus of claim 1 wherein the beverage is contained in a bag housed within the keg, and the keg dispensing device is connected to the bag and extends into the bag.

13. A beer or like alcohol beverage dispensing apparatus comprising:  
a keg containing beer or like alcohol beverage and having a bottom portion;  
a keg dispensing device extending into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion;

a cooling apparatus in heat transfer contacting relation with the bottom portion of the keg for cooling the beverage contained in the keg through the bottom portion,

wherein the keg comprises a material selected from the group consisting of steel, stainless steel and copper that initially cools the beverage in the keg upwards from the bottom portion of the keg to produce a stratified beverage temperature effect whereby, prior to all the beverage in the keg reaching a desired serving temperature, the beverage adjacent the bottom portion of the keg is the coolest beverage available for an initial beverage serving.

14. The apparatus of claim 13 wherein the keg has a top portion through which the keg dispensing device extends into the keg.

15. The apparatus of claim 14 wherein the keg dispensing device comprises a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing

the beverage therethrough and out of the keg.

16. The apparatus of claim 13 wherein the cooling apparatus comprises a cooling plate in heat transfer relation with the bottom portion of the keg for extracting heat therefrom and a Peltier thermoelectric device in heat transfer relation with the cooling plate for extracting heat from the cooling plate.

17. The apparatus of claim 13 further comprising insulated walls surrounding the keg.

18. The apparatus of claim 17 wherein the insulated walls have graduated insulation with greater insulation capability adjacent the bottom portion of the keg and lessening insulation capability adjacent a top portion of the keg.

19. The apparatus of claim 13 wherein the beverage is contained in a bag housed within the keg, and the keg dispensing device is connected to the bag and extends into the bag.

20. A beer or like alcohol beverage dispensing apparatus comprising:  
a keg containing beer or like alcohol beverage and having a bottom portion;  
a keg dispensing device extending into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion;  
a cooling apparatus in heat transfer contacting relation with the bottom portion of the keg for cooling the beverage contained in the keg through the bottom portion,

wherein the keg comprises an aluminum material that initially cools the beverage in the container in substantially homogeneous manner above the bottom portion of the keg whereby two servings of beverage dispensed from the keg are at substantially the same temperature prior to the beverage reaching a desired serving temperature.

21. The apparatus of claim 20 wherein the keg has a top portion through which the keg dispensing device extends into the keg.

22. The apparatus of claim 21 wherein the keg dispensing device comprises a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing the beverage therethrough and out of the keg.

23. The apparatus of claim 20 wherein the cooling apparatus comprises a cooling plate in heat transfer relation with the bottom portion of the keg for extracting heat therefrom and a Peltier thermoelectric device in heat transfer relation with the cooling plate for extracting heat from the cooling plate.

24. The apparatus of claim 20 further comprising insulated walls surrounding the

keg.

25. The apparatus of claim 20 wherein the beverage is contained in a bag housed within the keg and the keg dispensing device is connected to the bag and extends into the bag.

26. The apparatus of claim 20 wherein the keg has side walls extending up from the bottom portion and the cooling apparatus is adapted to extend up at least a portion of these side walls in heat exchange relation therewith.

27. A beer or like alcohol beverage dispensing apparatus comprising:  
a keg containing beer or like alcohol beverage and having a bottom portion;  
a keg dispensing device extending into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion;

a cooling apparatus in heat transfer contacting relation with the bottom portion of the keg for cooling the beverage contained in the keg through the bottom portion, which cooling apparatus comprises:

a first temperature sensor mounted in heat sensing relation with a bottom portion of the keg to sense first temperatures related to temperature of the beverage at the bottom portion of the keg;

a second temperature sensor mounted in heat sensing relation with an upper portion of the keg to sense second temperatures related to temperature of the beverage at the upper portion of the keg; and,

a cooling controller responsive to the first and second temperature sensors for controlling operation of the cooling apparatus to extract heat from the bottom portion of the keg to lower and maintain temperature of the beverage contained in the keg at a desired beverage serving temperature.

wherein the keg comprises a material selected from the group consisting of steel, stainless steel, aluminum and copper that initially cools the beverage in the keg upwards from the bottom portion of the keg and the beverage adjacent the bottom portion of the keg is the coolest beverage available for an initial beverage serving.

28. The apparatus of claim 27 wherein the keg has a top portion through which the keg dispensing device extends into the keg.

29. The apparatus of claim 28 wherein the keg dispensing device comprises a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing the beverage therethrough and out of the keg.

30. The apparatus of claim 27 wherein the cooling apparatus comprises a cooling

plate in heat transfer relation with the bottom portion of the keg for extracting heat therefrom and a Peltier thermoelectric device in heat transfer relation with the cooling plate for extracting heat from the cooling plate.

31. The apparatus of claim 27 further comprising insulated walls surrounding the keg.

32. The apparatus of claim 31 wherein the insulated walls have graduated insulation with greater insulation capability adjacent the bottom portion of the keg and lessening insulation capability adjacent a top portion of the keg.

33. The apparatus of claim 27 wherein the beverage is contained in a bag housed within the keg, and the keg dispensing device is connected to the bag and extends into the bag.

34. A beer or like alcohol beverage dispensing apparatus comprising:  
a keg containing beer or like alcohol beverage and having a bottom portion;  
a keg dispensing device extending into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion;

a cooling apparatus in heat transfer contacting relation with the bottom portion of the keg for cooling the beverage contained in the keg through the bottom portion,

wherein the keg comprises an aluminum material that initially cools the beverage in the container in substantially homogeneous manner above the bottom portion of the keg whereby two servings of beverage dispensed from the keg are at substantially the same temperature prior to the beverage reaching a desired serving temperature.

35. The apparatus of claim 34 wherein the keg has a top portion through which the keg dispensing device extends into the keg.

36. The apparatus of claim 35 wherein the keg dispensing device comprises a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing the beverage therethrough and out of the keg.

37. The apparatus of claim 34 wherein the cooling apparatus comprises a cooling plate in heat transfer relation with the bottom portion of the keg for extracting heat therefrom and a Peltier thermoelectric device in heat transfer relation with the cooling plate for extracting heat from the cooling plate.

38. The apparatus of claim 34 further comprising insulated walls surrounding the keg.

39. The apparatus of claim 34 wherein the beverage is contained in a bag housed

within the keg and the keg dispensing device is connected to the bag and extends into the bag.

40. The apparatus of claim 34 wherein the keg has side walls extending up from the bottom portion and the cooling apparatus is adapted to extend up at least a portion of these side walls in heat exchange relation therewith.

41. A keg for containing beer or like alcohol beverage and having a bottom portion in combination with a keg dispensing device which extends into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion and wherein the keg comprises a material selected from the group consisting of steel, stainless steel and copper that is adapted to allow initial cooling of the beverage in the keg upwards from the bottom portion of the keg to produce a stratified beverage temperature effect whereby, prior to all the beverage in the keg reaching a desired serving temperature, the beverage adjacent the bottom portion of the keg is the coolest beverage available for an initial beverage serving.

42. A keg containing beer or like alcohol beverage and having a bottom portion; a keg dispensing device extending into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion, wherein the keg comprises an aluminum material that is adapted allow to initial cooling of the beverage in the container in substantially homogeneous manner above the bottom portion of the keg whereby two servings of beverage dispensed from the keg are at substantially the same temperature prior to the beverage reaching a desired serving temperature.

43. The apparatus of claim 41 or 42 wherein the keg has a top portion through which the keg dispensing device extends into the keg, the keg dispensing device comprising a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing the beverage therethrough and out of the keg.

44. The keg of claim 27 or 28 wherein the beverage is contained in a bag housed within the keg and the keg dispensing device is connected to the bag and extends into the bag.

45. The keg of claim 27 or 28 wherein the bottom portion of the keg is adapted to be in mechanical and heat transfer contacting relation with an associated cooling plate.

46. A keg for containing beer or like alcohol beverage and having a bottom portion in combination with a keg dispensing device which extends into the keg to the bottom portion to draw the beverage from the keg adjacent the bottom portion and wherein the keg comprises a material selected from the group consisting of steel, stainless steel, aluminum and copper to allow initial cooling of the beverage in the keg upwards from the bottom portion of the keg and the beverage adjacent the bottom portion of the keg to be the coolest

beverage available for an initial beverage serving.

47. The keg of claim 46 wherein the keg dispensing device comprises a hollow spear having a remote open end adjacent the bottom portion of the keg for drawing the beverage therethrough and out of the keg.

48. The keg of Claim 47 which further includes:

a first temperature sensor mounted in heat sensing relation with a bottom portion of the keg to sense first temperatures related to temperature of a beverage at the bottom portion of the keg;

a second temperature sensor mounted in heat sensing relation with an upper portion of the keg to sense second temperatures related to temperature of a beverage at the upper portion of the keg.

49. The keg of claim 46 wherein a beverage is contained in a bag housed within the keg and the keg dispensing device is connected to and extends into the bag.